

REMARKS

Favorable reconsideration and allowance of the subject application are respectfully solicited.

Status of the Claims

Claims 1-17 are currently under consideration in this application, with Claims 1, 9 and 13 being independent. Claims 4, 5 and 7-11 are withdrawn from consideration. Claims 12-17 are newly added. Support can be found in the specification at least at page 3, lines 14-15 (Claims 12 and 15), page 2, lines 17-23 (Claim 13), page 9, lines 9-15 (Claim 14), page 7, lines 4-5 (Claim 16), and page 6, lines 16-18 (Claim 17). It is submitted that no new matter has been added by the amendments herein.

Restriction Requirement

The Examiner has made a restriction requirement between Claims 1-3 and 6, drawn to a recording medium, and Claims 10 and 11, drawn to a curl-controlling method. Claims 1-3 and 6 were considered to be constructively elected and Claims 10 and 11 were withdrawn from consideration. Applicant respectfully traverses this restriction requirement.

It is respectfully submitted that all of the claims could be searched by one Examiner without undue effort. It is also respectfully submitted that it is not mandatory to make a restriction requirement in every possible situation.

It is believed that if one Examiner acts on all of the claims of the present application at one time, overall examining time will be less than if two or more Examiners are

involved. It is also earnestly believed that the examination of all of the claims at one time by one examiner in the present application will best ensure uniform prosecution quality. Therefore, in the interest of prosecution economy of time and quality for both the Office and Applicant, it is respectfully submitted that withdrawal of this Restriction Requirement and examination of all pending claims on their merits are appropriate and such action is respectfully solicited.

Rejection Under Section 103

Claims 1-3 and 6 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Hirose et al. (U.S. Patent No. 6,203,899), taken alone or in view of either of Malhotra (U.S. Patent No. 6,180,238) or Cousin et al. (U.S. Patent No. 4,554,181). Applicant respectfully disagrees with these rejections.

Before addressing the merits of the rejections, Applicant believes it will be helpful to review some features and advantages of the present invention. As recited in Claim 1, the present invention relates to a recording medium comprising a substrate having two surfaces. An ink-receiving layer containing an inorganic pigment, and an outermost surface layer primarily comprising thermoplastic latex resin are provided, in this order, on both of the surfaces. The outermost latex surface layer forms a transparent film upon heating of the recording medium. Claim 9 relates to a print having similar features. Claim 13 is of similar scope to Claim 1, but recites that the outermost surface layer consists essentially of thermoplastic latex resin particles.

The objective of the present invention is to prevent curling — irrespective of the environment of the recording medium — by providing a layer containing thermoplastic latex resin on an ink-receiving layer formed on both sides of a substrate, and heating and forming a

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film of the layer containing thermoplastic latex resin, after forming an image on the ink receiving layer. In a system in which the ink-receiving layer and a latex layer are provided only on one side (Comparative Example 1 in the specification), curling occurs both before-ink jet recording and after latex film-forming (Table 1). Furthermore, in a system in which the ink-receiving layer is provided only on one side and the latex layer is provided on both sides (Comparative Example 2), curling occurs both before ink jet recording and after latex film-forming (Table 1). Thus, it is a feature of the invention to provide the ink-receiving layer and the layer containing thermoplastic latex resin on both sides of the substrate.

In Applicant's view, Hirose et al. does not describe any of: (1) providing the ink-receiving layer on both sides of the substrate, (2) providing the thermoplastic latex layer capable of being made transparent by heating on both sides of the ink-receiving layer, and (3) the subject of preventing curling. Accordingly, Applicant concludes that the present invention is not obvious over Hirose et al.

The Examiner takes the position that the outermost surface layer of Hirose et al. would inherently be transparent. To establish inherency, the missing feature must necessarily be present in the reference. MPEP 2112. Applicant respectfully submits that the outermost surface layer of Hirose et al. does not necessarily form a transparent film upon heating of the recording medium.

In the present invention, the outermost surface layer of the substrate primarily comprises (Claims 1 and 9) or consists essentially of (Claim 13) a thermoplastic latex resin (see page 8, lines 8-13 of the specification). In contrast, the surface layer disclosed in Hirose et al. is composed principally of cationic ultrafine particles such as oxides of metals or silica, and may

optionally contain a binder resin and other additive components (col. 3, line 62 to col. 4, line 3; col. 4, lines 40-43). Accordingly, the surface layer of Hirose et al. may or may not contain binder resin. Therefore, there is no basis to conclude that the surface layer of Hirose et al. would necessarily form a transparent film upon heating of the recording medium. Furthermore, even if the surface layer of Hirose et al. does include a binder resin, the principal component of the surface layer would still be ultrafine particles. This makes for a different composition than that of the surface layer of the present invention. Applicant concludes that the surface layer of Hirose et al. cannot be said to inherently form a transparent film upon heating of the recording medium. Accordingly, Hirose et al. does not render the present invention obvious.

The secondary references, Malhotra et al. and Cousin et al., mention that the recording sheet may be coated on both sides. However, like Hirose et al., neither of these references teaches or suggests an outermost surface layer that forms a transparent film upon heating of the recording medium. Accordingly, they do not remedy this deficiency of Hirose et al.

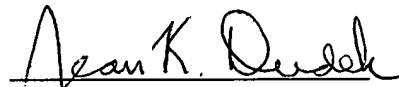
Conclusion

Applicant submits that the present invention is patentably defined by independent Claims 1, 9 and 13. The dependent claims are allowable for the reasons given with respect to their respective independent claims, and because they recite features which are patentable in their own right. Individual consideration of the dependent claims is respectfully solicited.

In view of the above amendments and remarks, the claims are now in allowable form. Therefore, rejoinder of withdrawn Claims 4, 5, 7-9 and 10-11 and early passage to issue are respectfully solicited.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,


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